DEPARTMENT OF THE ARMY Medical Department Activity

MEDDAC Memo No. 40-133 15 February 2005

Medical Services MODERATE SEDATION/ANALGESIA

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- 1. History. This issue published a revision of this publication.
- 2. Purpose. The purpose of this policy is to provide guidance on the use of moderate sedation/analgesia for outpatients undergoing invasive, manipulative, or constraining procedures at Raymond W. Bliss Army Health Center (RWBAHC). A history and physical is performed by a licensed independent practitioner (LIP) and a pre-anesthesia evaluation by a certified moderate sedation nurse for each patient. Moderate sedation/analgesia (Level 2) of the patient is generally achieved when there is slurred speech but the patient is arousable and is able to respond. This policy does not apply to IV sedation used for therapeutic management of pain control, pre-medication for anxiolytic purposes, or for seizures. The Chief, Anesthesia and Perioperative Services (DAPS), is responsible for the annual review of this policy.
- 3. References.

^{*}This MEDDAC Memo supersedes MEDDAC Memo 40-133, dtd 6 Dec 04

- **3.1** The American Society of Anesthesiologists, "Guidelines for Non-operating Room Anesthetizing Locations," (current edition).
- **3.2** The American Society of Anesthesiologists, "Basic Standards for Preanesthesia Care," (current edition).
- **3.3** The American Society of Anesthesiologists, "Standards for Basic Anesthetic Monitoring," (current edition).
- **3.4** The American Society of Anesthesiologists, Standards for Post Anesthesia Care," (current edition).
- **3.5** The American Society of Anesthesiologists, "Guidelines on Sedation and Analgesia by Non-Anesthesiologists," (current edition).
- **3.6** The American Academy of Pediatrics Committee on Drugs, "Guidelines for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures," 1993.
- 3.7 The Journal of Clinical Anesthesia, Holzman RS, Cullen DJ, Eichorn JH, Philip JH. "Guidelines for Sedation by Nonanesthesiologists During Diagnostic and Therapeutic Procedures," 1994; 6:265-276.
- 3.8 American Society of Post Anesthesia Nurses, "Standards of Post Anesthesia Nursing Practice," "Resource 18 The Role of the Registered Nurse in the Management of Patients Receiving IV Conscious Sedation for Short-term Therapeutic, Diagnostic, or Surgical Procedures," 1992.
- 3.9 Association of Operating Room Nurses Recommended Practices, "Monitoring the Patient Receiving IV Conscious Sedation," 1998.
- **3.10** Joint Commission on Accreditation of Comprehensive Accreditation Manual for Ambulatory Care; (current edition).
- 3.11 Pain Management Policy.
- **4.** SCOPE. This policy applies to RWBAHC staff who are certified or granted clinical privileges to administer pharmacological agents for moderate sedation/analgesia and to qualified support personnel who contribute to the care of the patient.

- 5. Definitions.
- **5.1** Physical Status Classification (PS): risk assessment and guidelines for physical status classification according to the American Society of Anesthesiologists (see Appendix A). Moderate sedation may be performed on PS I, II, selected PS III, and patients eight years of age or older.
- **5.2** Licensed Independent Practitioner (LIP): any individual permitted by law and by the organization to provide care and services, without direction or supervision, within the scope of the individual's license and consistent with individually granted clinical privileges.
- **5.3** Sedation: the various degrees of sedation defined in the following paragraphs occur on a continuum. The patient may progress from one degree to another, based on the medications administered, route, and dosages. The determination of patient monitoring and staffing requirements should be based on the patient's acuity and the potential response of the patient to the procedure (see APPENDIX B).
- **5.4** Level 1 Minimal sedation (anxiolysis): a drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilatory and cardiovascular functions are unaffected. In this stage the following should be present:
- **5.4.1** Normal respiration;
- 5.4.2 Normal eye movements; and
- **5.4.3** Intact protective reflexes.
- **5.5** Level 2 Moderate sedation/analgesia ("conscious sedation"): a drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. In this stage, the following should be present:
- 5.5.1 Patent airway;
- **5.5.2** Adequate spontaneous ventilation;
- 5.5.3 Cardiovascular function maintained; and

- **5.5.4** Sedation level of 2 on a scale of 4 (see Appendix B, Sedation Scale).
- 5.5.5 Clinical end points are slurred speech and nystagmus.
- 5.6 Level 3 Deep sedation/analgesia: a drug-induced depression of consciousness from which the patients are not easily aroused but respond purposefully following repeated or painful stimulation. Both patient and procedure related factors might increase the risk of moderate sedation. For example, even the most cooperative of patients may have difficulty tolerating extremely invasive procedures with moderate sedation alone. In some instances the need for level 3, deep sedation, is anticipated. Coordination for an anesthesia provider to be present is required. When a level 3 sedation is occurs and not recognized, stop the procedure and enlist the assistance of an anesthesia provider (if available) or the LIP. In this stage, the following may occur:
- **5.6.1** The ability to independently maintain ventilatory function may be impaired;
- **5.6.2** Patients may require assistance in maintaining a patent airway;
- 5.6.3 Spontaneous ventilation may be inadequate;
- 5.6.4 Cardiovascular function is usually maintained; and
- 5.6.5 Sedation level of 3 on a scale of 4.
- 5.7 Level 4 Anesthesia: consists of general anesthesia or major regional anesthesia. It does not include local anesthesia. General anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. In this stage the following may be present:
- **5.7.1** The ability to independently maintain ventilatory function is often impaired;
- **5.7.2** Patients often require assistance in maintaining a patent airway;

- **5.7.3** Positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function;
- 5.7.4 Cardiovascular function may be impaired.
- 5.8 Criteria for the use of reversal agents:
- **5.8.1** Loss of protective airway reflexes (unable to cough or swallow);
- **5.8.2** Unresponsive to verbal or noxious stimuli (jaw thrust, sternal rub);
- **5.8.3** Oxygen saturation less than 90% with 100% O2 via face mask for 2-3 minutes;
- **5.8.4** Respiratory rate less than 10 breaths per minute for 2-3 minutes.
- **5.9** Emergency Management: the means for notifying support services such as practitioners skilled in tracheal intubation. Emergency resuscitative equipment must be immediately available on site.
- 6. General.
- **6.1** Moderate sedation/analgesia is permitted only in the Specialty Clinic endoscopy Room (D-29-1) and the minor procedure room (D-21).
- **6.2** Sufficient numbers of qualified personnel (not including the licensed independent practitioner) must be present. In addition to the licensed independent practitioner performing the procedure, there must be a "dedicated" certified sedation nurse.
- **6.3** Moderate sedation/analgesia drugs are administered only by an LIP or a registered nurse (RN) certified in moderate sedation/analgesia. The moderate sedation certified nurse must be with the patient at all times and able to recognize and rescue a patient from level 3 (deep sedation/analgesia).
- 7. Procedures.

- 7.1 Responsibilities:
- 7.1.1 Chief, Department or Service will:
- **7.1.1.1** Ensure a uniform level of care for moderate sedation/analgesia patients as well as monitoring this activity through their performance improvement process.
- **7.1.1.2** Ensure that LIP's doing procedures requiring moderate sedation has privileges for such procedures. Evidence of necessary training and experience as well as demonstrated competence will be considered prior to recommending such privileges for LIPs during initial privileging and at reappointment.
- 7.1.1.3 Ensure sedation nurses responsible for moderate sedation/analgesia are trained in airway management and trained in the safe use of drugs specified by this policy. Trained in airway management shall mean that their training is consistent with the airway management goals and procedures used for Advanced Cardiac Life Support (ACLS) or Pediatric Advanced Life Support (PALS), including airway positioning, use of oropharyngeal and nasopharyngeal airways, and application of positive pressure ventilation by self-inflating bag, valve and mask.
- 7.1.2 LIP certified in moderate sedation/analgesia will:
- 7.1.2.1 Demonstrate the acquired knowledge of anatomy, physiology, pharmacology, cardiac arrhythmia recognition, and complications related to moderate sedation/analgesia medications;
- **7.1.2.2** Assess total patient care requirements during the procedure and recovery. Physiological measurements should include, but are not limited to, respiratory rate, oxygen saturation, blood pressure, cardiac rate and rhythm, and the patient's level of consciousness;
- **7.1.2.3** Understand the principles of oxygen delivery, respiratory physiology, oxygen transport and oxygen uptake, and can demonstrate the ability to use oxygen delivery devices;
- **7.1.2.4** Anticipate and recognize potential complications of moderate sedation/analgesia in relation to the type of medication being administered and rescue a patient from deep sedation/analgesia.

- **7.1.2.5** Implement the requisite knowledge and skills to assess, diagnose and intervene in the event of complications or undesired outcomes, and to institute interventions in compliance with orders (including standing orders) or institutional protocols or guidelines;
- **7.1.2.6** Demonstrate skill in airway management and resuscitation;
- 7.1.2.7 Assure that the crash cart is readily available;
- 7.1.2.8 Provide documentation of 10 cases performed annually.
- 7.1.3 A moderate sedation/analgesia certified RN will:
- **7.1.3.1** Maintain current Basic Life Support (BLS) certification. Advanced Cardiopulmonary Life Support (ACLS) is recommended;
- 7.1.3.2 Attend re-certification training or provide documentation of 10 moderate sedation cases performed annually;
- 7.1.3.3 Have supplemental oxygen by nasal prongs or mask, as well as a ventilatory device immediately available if oxygen saturation decreases by 5% from the patient's baseline. If there are signs of respiratory compromise, notify the LIP immediately;
- **7.1.3.4** Complete a performance improvement tool (see APPENDIX C) for each patient or review 10 moderate sedation records per month utilizing MedTrends Analysis.
- **7.1.3.5** Analysis and report to the Executive Committee of Professional Staff (ECOPS) and the Pharmaceutical and Therapeutics (P&T) committee will be done quarterly by the anesthesia provider.
- 7.2 Equipment.
- 7.2.1 A standardized emergency cart must be readily available.
- **7.2.2** Age-specific masks and self-inflating bags with a nonrebreather valve capable of delivering positive pressure ventilation.
- **7.2.3** Functional suction apparatus with appropriate suction catheters must be immediately available.

- 7.2.4 Equipment for noninvasive measurement of blood pressure, oxygen saturation monitoring, and cardiac monitoring must be available and in good working order immediately before, during, and after the procedure. This shall include means for providing supplemental O2, i.e., nasal prongs, nonrebreather masks. A capnometer is useful in monitoring end-tidal CO2 and ventilation.
- **7.2.5** Reversal agents such as Naloxone (Narcan) and Flumazenil (Romazican) must be available.
- **7.2.6** All equipment shall be inventoried and maintained on a regularly scheduled basis, in accordance with the Emergency Response Protocol, Resuscitative Equipment, and Supplies policy.
- 7.3 Procedure and Documentation
- 7.3.1 Pre-procedure:
- **7.3.1.1** informed consent for the procedure and risks/benefits of moderate sedation
- 7.3.1.2 History and physical
- 7.3.1.3 Identified responsible adult to escort home
- **7.3.1.4** Minimum documentation on RWBAHC OP 265, Pre-anesthesia Evaluation, will include:
 - Indication/symptoms for the procedure requiring moderate sedation/analgesia sedation.
 - Drug allergies and previous adverse drug reactions.
 - Current medication, to include dosage and route of administration.
 - Previous experience with sedation/analgesia/anesthesia.
 - Alcohol, tobacco, illicit substance use.
 - Diseases, disorders, and abnormalities.
 - Pertinent family history of diseases or disorders.
 - Review of systems.
 - Time of last food and fluid intake.
 - Airway risk assessment (see Appendix D).

- Risk assessment IAW American Society of Anesthesiologist (ASA) Physical Status (PS) Classification.
- Recommend the following: Adult NPO for 8 hours or nothing after midnight for solids and nonclear liquids.

 No clear liquids 2-3 hours before the procedure.
- allergies
- **7.3.1.5** A patient reassessment immediately prior to moderate sedation administration will include a minimum documentation of:

Vital signs, including heart rate, blood pressure, respiratory rate, oxygen saturation and temperature. Pulmonary and cardiac exam. Airway risk assessment ASA classification

- **7.3.1.6** Minimum lab test for scheduled, routine procedures will also include pregnancy status per urine HCG on women of child bearing age within the last 72 hours.
- **7.3.1.7** All patients receiving moderate sedation/analgesia will have venous access. Venous access will be discontinued prior to the patient's discharge.
- 7.3.2 Intra-procedure:
- 7.3.2.1 Prior to the administration of moderate sedation/analgesia drugs, vital signs to include heart rate, respiratory rate, blood pressure, oxygen saturation, and for patients with a history of cardiac problems, continuous cardiac monitoring, will be obtained and documented on Medical Record-Anesthesia DA Form 7389.
- **7.3.2.2** All orders for will be documented on the MEDCOM Form 688-A MAR 99 and signed by the LIP.
- 7.3.2.3 Medication A LIP selects and orders the medication and must be present within the department during the initial and continued administration of the medication. Authorized sedatives, opioids, and antagonists used are listed on Appendix E (Authorized Medication for Moderate Sedation/Analgesia and Suggested Safe medication Dosage Range). The dosage guidelines are suggested maximum doses.

7.3.2.4 Minimum required chart documentation

Physical classification Airway risk assessment Allergies

Level of sedation (see Appendix B, Sedation Scale)
Monitoring devices or equipment used

Physiological data from continuous monitoring, documented at 5to 15-minute intervals and at any significant event

Dosage, route, time and effects of the medications
Any interventions, such as oxygen (liters/minute) or
intravenous therapy, method of delivery and the
patient's response recorded on DA Form 7389.
Any untoward or significant reactions and resolutions.
Baseline pain assessment (presence, if present,
intensity, location, quality, duration, aggravating
and alleviating factors)

7.3.2.5 Adult and pediatric patients will have these physiologic parameters recorded, at a minimum, every 5 minutes or more frequently if warranted, until sedation level 2 is achieved.

Oxygen saturation level
Blood pressure
Cardiac rate
Respiratory rate
Continuous cardiac monitoring
Level of sedation (see Appendix B, Sedation Scale)
Pain intensity

- 7.3.3 Post-procedure:
- **7.3.3.1** After the procedure, the patient must be monitored by a nurse or LIP in a suitable location (Post Anesthesia Care Unit).
- 7.3.3.2 Minimum required equipment and medication available:

Functioning suctioning apparatus and catheters.

Self-inflating positive-pressure oxygen delivery system.

A standardized emergency cart must be readily available.

Equipment for noninvasive measurement of blood pressure, oxygen saturation and cardiac

monitoring must be readily available and in good working order immediately before, during, and after the procedure. This shall include means for providing supplemental oxygen delivered via nasal prongs and nonrebreathing masks.

Reversal agents such as Narcan and Romazicon must be available.

7.3.3.3 Minimum documentation at least every 15 minutes until post-anesthesia discharge criteria are met will include:

oxygen saturation level
blood pressure
cardiac rate
respiratory rate
level of sedation
pain intensity
Post Anesthesia Recovery Score (PARS)Post
Anesthesia Care Unit Flow Sheet, RWBAHC OP 261)

7.3.3.4 Significant variations in physiologic parameters will be reported to the LIP immediately, including a variation of plus or minus 20 % in BP; arrythmias; oxygen saturation 5% below baseline; dyspnea, apnea, or hypoventilation; diaphoresis; inability to arouse the patient; the need to maintain the patient's airway mechanically; and other untoward or unexpected patient responses.

7.3.4 Discharge

- **7.3.4.1** A physician or LIP using Post Anesthesia Recovery Scoring (PARS) criteria will discharge the patient from the PACU when a PARS score of 10 is achieved. For those patients where a PARS score is not applicable, a return to the pre-sedated level of responsiveness is required for discharge.
- **7.3.4.2** If antagonists/reversal agents were required, a minimum of two hours should have elapsed after the last administration of reversal agents. This is to ensure patients do not become resedated after reversal effects have abated. DA 4106 should be completed on all reversals given and reviewed by an anesthesia provider.
- **7.3.4.3** Written discharge instructions will be given to the patient, parent or guardian of a pediatric patient prior to the procedure and reviewed with the responsible adult accompanying

the patient home after the procedure. They should consist of the following:

No driving for 24 hours.

No consumption of alcoholic beverages for 24 hours.

No important decisions (do not sign important papers) for 24 hours.

Delineation of physical limitations and dietary restrictions.

Phone number to accessible medical care after duty hours.

7.4 Performance Improvement Activities

- **7.4.1** Continuous Performance Improvement activities will be conducted on an ongoing basis. Performance Tools will be used and re-designed as needs for improvement change. Tracking and monitoring adverse events provides opportunity to learn and improve.
- **7.4.2** Anesthesia Services will be responsible for tracking, trending, and identifying potential performance improvement initiatives and report to the Executive Committee of Professional Staff (ECOPS) and the Pharmaceutical and Therapeutics Committee on a quarterly basis. This **DOES NOT** replace the DA Form 4106 for reportable occurrences.
- 7.4.3 Certification and annual re-certification (or 10 documented moderate sedation cases) is mandatory for sedation nurses involved in moderate sedation. Initial certification requires attendance at classes that emphasize a review of dysrhythmias, airway management and drugs used for moderate sedation (see Appendix F, Guidelines for Moderate Sedation/Analgesia Certification and Re-certification Training). Documentation of 10 cases or attendance at a moderate sedation/analgesia re-certification class annually should be annotated in the certified moderate sedation nurse's Competency Assessment Folder (CAF) (see Appendix G, Moderate Sedation/Analgesia Log). Anesthesia Services is responsible for tracking current certification as well as coordinating classes to ensure RNs are able to obtain necessary training.
- **7.4.4** The officer in charge of each sedation site is responsible for verifying the competence of all involved staff prior to the administration of moderate sedation/analgesia medication.

7.5 Each department/service providing moderate sedation/analgesia shall post this policy in each area where it is practiced.

The proponent of this publication is the Department of Anesthesia and Perioperative Services. Send comments and suggested improvements to Commander, USAMEDDAC, ATTN: MCXJ-DS, Fort Huachuca, Arizona 85613-7040

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APPENDIX A

Risk Assessment

American Society of Anesthesiologists (ASA) Physical Status (PS) Classification

CLASS I

There is no organic, physiologic, biochemical, or psychiatric disturbance. The pathologic process for which operation is to be performed is localized and is not a systemic disturbance.

CLASS II

Mild to moderate systemic disturbance caused either by the condition to be treated surgically or by other pathophysiologic processes.

CLASS III

Severe systemic disturbance or disease from whatever cause, even though it may not be possible to define with finality the degree of disability.

CLASS IV

Indicative of the patient with severe systemic disorder that is already life threatening and not always correctable by the operative procedure.

CLASS V

The moribund patient who has little chance of survival but has submitted to operation in desperation.

APPENDIX B Sedation Scale

SEDATION LEVEL

DEFINITIONS OF FOUR LEVELS OF SEDATION AND ANALGESIA

1 **Minimal sedation** (anxiolysis)

A drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilatory and cardiovascular functions are unaffected.

Moderate sedation/analgesia ("conscious sedation")

A drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.

3 Deep sedation/analgesia

A drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

4 Anesthesia

Consists of general anesthesia and spinal or major regional anesthesia. It does not include local anesthesia. General anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.

APPENDIX C

Moderate Sedation/Analgesia Performance Improvement Tool

DATE: PATIENT NAME/SSN:

Before the procedure:

- History and Physical and reassessment by Licensed Independent Practitioner Y / N
- 2. Pre-anesthesia Assessment/reassessment by certified moderate sedation/analgesia RN $\,$ Y / N
- 3. Consent Form(s) explaining risks, benefits, and alternatives for procedure and anesthetic plan $\,$ Y / N
- 4. NPO status, Airway Classification, ASA Classification, and Allergies noted Y / N

During the procedure:

- 1. Documentation of required monitors (blood pressure, pulse oximetry, EKG, and pulse oximetry $\ \ Y\ /\ N$
- 2. Documentation of oxygen saturation, vital signs every 5 15 minutes, pain intensity and sedation level (1 through 4) Y / N
- 3. O2 Saturation less that 90% on 100% O2 via face mask for greater that 2-3 minutes

or 5% below patient's baseline?

- 4. Blood pressure plus or minus 20% of patient's normal? Y / N
- 5. Symptomatic Bradycardia? Y / N
- 6. Symptomatic Tachycardia? Y / N
- Respiratory rate less than 10 breaths per minute for 2-3 minutes?
 Y / N

8.	Anesthesia provider called to assist?	Y/N
9.	Unresponsive to noxious stimuli (sternal rub, jaw thrust)?	Y/N
10.	Loss of protective airway reflexes (unable to cough or swal Y / N	low)?
11.	Reversal (circle: Narcan or Romazicon) given? AMOUNT Y / N	<u>:</u>
After th	e procedure:	
1.	Documentation of pain intensity?	Y/N
2.	Reversal (circle: Narcan or Romazicon) given? AMOUNT: Y / N	
3.	Documentation of Post Anesthesia Recovery Room Score Y / N	
4.	Discharge teaching to patient/family member/escort?	Y/N
5.	Unplanned Admission?	Y/N

APPENDIX D

Airway Risk Assessment

- 1. Positive pressure ventilation, with or without endotracheal intubation, may be necessary if respiratory compromise develops during sedation. This may be more difficult in patients with atypical airway anatomy. Also, some airway abnormalities may increase the likelihood of airway obstruction during spontaneous ventilation. Factors that may be associated with difficulty in airway management are:
 - a. History
- b. Previous problems with sedation, analgesia, and/or anesthesia
 - c. Stridor, snoring, or sleep apnea
- d. Dysmorphic facial feature like Pierre-Robin syndrome, trisomy 21
 - e. Advanced rheumatoid arthritis
- 2. Physical Examination
- a. Habitus Significant obesity (especially involving the neck and facial structures)
- b. Head and neck Short neck, limited neck extension, decreased hyoid-mental distance, neck mass, cervical spine disease or trauma, tracheal deviation
- c. Mouth Small opening, edentulous, protruding incisors, loose or capped teeth, high arched palate, macroglossia, tonsillar hypertrophy, nonvisible uvula
- d. Jaw Micrognathia retrognathia, trismus, significant malocclusion
- 3. Modified Mallampati: Pharyngeal Classification

Class	Components Visualized Orophargyngeal
I	Soft palate, uvula, tonsillar pillars.
II	Base of the tongue obscures the tonsillar
	pillars, but the posterior pharyngeal wall
	is visible below the soft palate.
III	Soft palate (potential difficult airway)
IV	Essentially nothing visualized, not even
	soft palate
	(difficult airway).

APPENDIX E

Authorized Medication for Moderate Sedation/Analgesia and Suggested Safe Medication Dosage Range

GENERAL CAUTIONS: 1. Individualize dose. 2. Do not give by rapid or single bolus IV administration. 3. Expect individual response to vary with age, physical status, and concomitant medications. 4. Use small increments to achieve the appropriate level of sedation. 5. Wait 2 or more minutes after each increment to evaluate sedative effect fully.

Medication	<u>Dosage</u>	<u>Comments</u>
<u>SEDATIVES</u> : Midazolam (Versed)	PO - 0.5-0.7 mg/kg IM - 0.1-0.3 mg/kg IV - 0.05 mg/kg	
Diazepam (Valium)	PO - 0.15-0.3 mg/kg	
OPIOIDS: Fentanyl		
Morphine	IV - 0.00I-0.003 mg/kg (1-3 mcg/kg)	Oral preparation is
Demerol	PO - 0.5-1.0 mg/kg IM - 0.1 mg/kg IV - 0.1 mg/kg	sustained release
ANTAGONISTS: Flumazenil (Romazicon)	IM - 1mg/kg IV - 1mg/kg	Partial antagonism
(For Benzodiazepines)	IV - 0.01-0.02mg	Complete antagonism Benzodiazepine
	IV - 0.4-1.0 mg	withdrawal-induced seizures; residual sedation and hypoventilation
Naloxone (Narcan) (For Opioids)	IV - 0.01-0.10 mg/kg	Titrate to desired effect (brief duration of action) Pediatric dose not yet established

APPENDIX F

Guidelines For Moderate Sedation/Analgesia Certification And Re-certification Training

1. Certification to establish competency: Personnel involved in procedures requiring moderate sedation/analgesia for their patients must be privileged or certified. Initial certification classes are as follows:

•	Policy Review (MEDDAC Memo 40-133)	- 45 minutes
•	Dysrhythmias	- 45 minutes
•	Airway management	- 45 minutes
•	Pharmacology	- 45 minutes

- 2. Re-certification to establish ongoing competency: Re-certification may be obtained one of the following two ways:
 - Annual attendance in a moderate sedation/analgesic class
 - Documentation/log of participating in 10 moderate sedation cases

3. Documentation:

- a. It is the LIP's and Certified Monitor's responsibility to keep current certification and re-certification documentation in credential and/or unit human resources files.
- b. Documentation should include the moderate sedation certificates or recertification patient log sheets. The re-certification patient log sheet should include the patient's name, sponsor's social security number, date of the procedure, procedure done, drugs used and any comments.

APPENDIX G MODERATE SEDATION/ANALGESIA LOG

IV SEDATION LOG FOR:

MENTS